

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference Az. 3464	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/013387	International filing date (day/month/year) 28 November 2003 (28.11.2003)	Priority date (day/month/year) 23 December 2002 (23.12.2002)
International Patent Classification (IPC) or national classification and IPC G01J 5/00, H01L 21/00		
Applicant	MATTSON THERMAL PRODUCTS GMBH	

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 8 sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 10 July 2004 (10.07.2004)	Date of completion of this report 22 April 2005 (22.04.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/013387

I. Basis of the report

1. With regard to the elements of the international application:*

 the international application as originally filed the description:

pages _____, 1-35, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement under Article 19)

pages _____, filed with the demand

pages 1-42, filed with the letter of 11 April 2005 (11.04.2005)

 the drawings:

pages 1/8-8/8, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. The amendments have resulted in the cancellation of: the description, pages _____ the claims, Nos. _____ the drawings, sheets/fig _____5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

	International application No. PCT/EP 03/13387
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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-42	YES
	Claims		NO
Inventive step (IS)	Claims	1-42	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-42	YES
	Claims		NO

2. Citations and explanations

1. The international search report citations are numbered D1-D3 in the order in which they appear in the search report.

D1: US 2002/107604 A1 (CAMPBELL WILLIAM JARRETT ET AL.) 8 August 2002 (2002-08-08)

D2: US-A-5 442 727 (FIORY ANTHONY T) 15 August 1995 (1995-08-15)

D3: US-B1-6 191 392 (HAUF MARKUS ET AL.) 20 February 2001 (2001-02-20)

The following documents were not cited in the international search report. Copies are attached.

D4: US-B1-6 373 033

D5: US-A-5 895 596

D6: US-A-5 583 780

2. D4, which is considered to be the closest prior art, discloses a method for determining at least one state variable from a model of an RTP system by means of at least one test signal picked off from the RTP system, that is to say the measured quantity, which varies with the state variable to be

determined, and a measured quantity predicted using the model, that is to say the predicted value (see column 10, lines 8-38 and fig. 5).

Similar methods are known from D5 and D6 (see D5, line 59 to column 13, line 5; and D6, column 12, line 19 to column 14, line 3). None of the above citations discloses, however, that the alternating component of the measured quantity and the alternating component of the predicted value are identified separately by means of filters in order to produce a difference between the alternating component of the measured quantity and the alternating component of the measured quantity as predicted by the model, and that said difference in the alternating components is fed back into the model to adapt the model behaviour.

In particular, for a person skilled in the art there is nothing in any of the documents D4-D6 to suggest the principle of viewing the direct component and the alternating component separately.

The present method permits an increase in measuring accuracy by compensating factors that disrupt the modulation of the radiant heaters. The subject matter of claim 1 can therefore be regarded as novel and inventive (PCT Article 33(2) and (3)).

3. Claims 2-42 are dependent on claim 1 and therefore likewise satisfy the PCT novelty and inventive step criteria.